

REMARKS

Claims 1-16 and 18 are pending. Claims 17 and 19 are cancelled by this amendment. Claims 1, 11, 16 and 18 have been amended. No new matter has been presented.

Claims 11-12, 14 and 18-19 are rejected under 35 USC 102(b) as being anticipated by Buchenrieder, U.S. Patent No. 5,706,225. This rejection is respectfully traversed.

Buchenrieder discloses using standard dynamic random access memory cells (DRAM cells) (see column 1, lines 30 - 32, column 2, line 57, etc.). Claims 1, 11, 16 and 18 all have been amended to recite PMC memory cells, which are not taught or suggested by Buchenrieder.

Further, Buchenrieder discloses using DRAM memory cells of two different types, namely, DRAM memory cells SP with a capacitor of a first capacitance C1, and DRAM memory cells SP with a capacitor of a second, different capacitance C2 (Figure 1, column 2, lines 38 - 46). Each individual memory cell SP provides for non-changeable storage permanence, which depends on the respective capacitance C1, C2. After, e.g. a "1" is stored in a respective DRAM memory cell by charging the respective capacitor, a discharging of the capacitor takes place (column 2, lines 28 - 30). To assure that the "1" remains stored, the memory cell needs to be recharged/refreshed after a certain time, or, in other words, at a certain clock rate f_1, f_2 ("clock rate of the refresh signal").

Buchenrieder also teaches using two different operating modes (see column 1, lines 48 - 66, column 2, lines 55 - 67). The first mode is a mode where both the DRAM memory cells with a capacitor of the above first capacitance C1, and the DRAM memory cells with a capacitor of the above second, different capacitance C2 are recharged/refreshed often enough to ensure that the respective data remains stored in both the DRAM memory cells with a capacitor of the above first capacitance C1, and the DRAM memory cells with a capacitor of the above second, different capacitance C2. For this purpose, a refresh signal having a first relatively high clock rate is used (see column 1, lines 48-52, column 2, lines 55-57).

The second mode is a mode where only the DRAM memory cells with a capacitor of the above second capacitance C2, but not the DRAM memory cells with a capacitor of the above first capacitance C1, are recharged/refreshed often enough to ensure that the respective data remains stored in the respective DRAM memory cells. For this purpose, a refresh signal having a second lower clock rate is used (see column 1, lines 53 - 67, column 2, lines 58 -67).

Thus, Buchenrieder merely teaches using different types of DRAM memory cells, namely, DRAM memory cells SP with a capacitor of a first capacitance C1, and DRAM memory cells SP with a capacitor of a second, different capacitance C2, and using refresh signals with different clock rates, depending on the operating mode. In other words, Buchenrieder teaches to refresh DRAM memory cells more or less often, depending on the operating mode.

According to Buchenrieder, as submitted above, each individual memory cell provides for a non-changeable storage permanence, which depends on the respective capacitance C1, C2 of the capacitor used in the respective memory cell.

Accordingly, applicants submit that Buchenrieder does not teach or suggest "operating a PMC memory component in accordance with a specific mode selected by a mode selection signal, wherein depending on the specific mode selected an individual PMC memory cell of the PMC memory component is brought into states of different storage permanence."

Further, Buchenrieder, e.g., does not teach or suggest the features that "depending on the specific mode selected an individual PMC memory cell of the PMC memory component is brought into states of different storage permanence by correspondingly selecting a height of a current of a programming pulse applied to the PMC memory cell." Rather, Buchenrieder always uses a DRAM refresh signal of one and the same voltage U (see Figure 2, column 2, lines 27 - 28).

Thus, the features of claims 11 and 18 are not taught or suggested by Buchenrieder. The remaining claims are allowable at least due to their respective dependencies. Applicants request that this rejection be withdrawn.

Claims 1-3, 5-10 and 15-17 are rejected under 35 USC 103(a) as being unpatentable over Buchenrieder in view of Moore, U.S. Patent Publication No. 2002/0127886. This rejection is respectfully traversed.

Independent claims 1 and 16 are allowable for the reasons set forth above and further in view of Moore's failure to overcome the deficiencies of Buchenrieder. The remaining claims are allowable at least due to their respective dependencies. Applicants request that this rejection be withdrawn.

Claim 4 is rejected under 35 USC 103(a) as being unpatentable over Buchenrieder in view of Moore, as applied to claim 1 above and further in view of Hu, U.S. Patent No. 5,768,182. This rejection is respectfully traversed.

Claim 4 is allowable at least due to its dependency and further in view of Moore's and Hu's failure to overcome the deficiencies of Buchenrieder. Applicants request that this rejection be withdrawn.

Claim 13 is rejected under 35 USC 103(a) as being unpatentable over Buchenrieder as applied to claim 11 above and further in view of Hu. This rejection is respectfully traversed.

Claim 13 is allowable at least due to its dependency and further in view of Hu's failure to overcome the deficiencies of Buchenrieder. Applicants request that this rejection be withdrawn.


In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue. If it is determined that a telephone conference would expedite the prosecution of this application, the Examiner is invited to telephone the undersigned at the number given below.

In the event the U.S. Patent and Trademark office determines that an extension and/or other relief is required, applicants petition for any required relief including extensions of time and

authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to Deposit Account No. 03-1952 referencing docket no. 543822002600.

Dated: February 28, 2007

Respectfully submitted,

By 

Deborah S. Gladstein

Registration No.: 43,636
MORRISON & FOERSTER LLP
1650 Tysons Blvd, Suite 300
McLean, Virginia 22102
(703) 760-7753